

REMARKS

Claims 1-35 are currently pending in the subject application and are presently under consideration. A marked-up version of all pending claims is found at pages 3-9 of this Reply. Claims 15, 28, and 29 have been amended herein. Claim 27 has been cancelled herein. The specification has also been amended herein. A marked-up version of the specification paragraph is found at page 2 of this Reply.

Applicant's representative notes with appreciation the Examiner's indication that claims 3-6, 9, 14, 17, and 27 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 15 has been amended herein to recite the limitations of claim 27, which is directly dependent from claim 15. Therefore, independent claim 15, and all claims dependent there from, are now believed to be allowable. Applicant's representative respectfully reserves the right to recast the remaining allowable claims in independent form at a later date if necessary. However, such amendments are not believed necessary in view of the below-noted deficiencies of the cited art *vis-à-vis* applicant's claimed invention.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Election/Restrictions

In a previous paper, applicant's representative elected with traverse Group I (claims 1-30 drawn to the structure of the armature assembly of the motor, classified in class 310, subclass 215) for further prosecution on the merits. Regarding non-elected Group II (claims 31-35), applicant's representative respectfully requests that the Examiner withdraw these claims. Applicant's representative further respectfully reserves the right to rejoin claims 31-35 upon an indication that claims 1-30 are in condition for allowance.

II. Drawings

The drawings are objected to under 37 C.F.R. §1.84(p)(4). The drawings have been amended herein to correct certain informalities in accordance with the Examiner's comments.

Specifically, designation of the plate ends has been changed from “62 and 64” to “63 and 64.” The specification has been amended herein accordingly. Three (3) replacement drawing sheets for Figure 1, Figures 4 and 5, and Figures 6, 7, and 9, respectively, are attached hereto following the last page of this Reply, as required by 37 C.F.R. §1.84. The changes in reference numerals have been made to Figures 1, 5, and 6 only. Therefore, withdrawal of this objection is respectfully requested.

III. Rejection of Claim 28 Under 35 U.S.C. §112, sixth paragraph

Claim 28 stands rejected under 35 U.S.C. §112, sixth paragraph. Claim 28 has been amended herein to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. Specifically, the subject “means” phrase has been amended to specify a function associated therewith. No new matter has been introduced, and support for the amendment can be found in the specification at, for example, page 5, line29- page 6, line 8. Therefore, withdrawal of this rejection is respectfully requested.

IV. Rejection of Claim 28 and 29 Under 35 U.S.C. §112, second paragraph

Claims 28 and 29 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 28 and 29 have been amended herein to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. No new matter has been introduced, and support for the amendments can be found in the specification at, for example, page 5, line29- page 6, line 8. It is believed that claims 28 and 29 are now in complete compliance with under 35 U.S.C. §112, second paragraph. Therefore, withdrawal of this rejection is respectfully requested.

V. Rejection of Claims 1, 2, 7, 8, 10, 11, and 12 Under 35 U.S.C. §103(a)

Claims 1, 2, 7, 8, 10, 11, and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Keuper *et al.* (U.S. Patent 3,940,647) and further in view of Moore (U.S. Patent 4,469,971). Applicant’s representative respectfully points out that although the

Examiner's rejection cites Moore as a secondary reference, the Examiner's arguments make no reference to Moore. Rather, the arguments presented by the Examiner reference Nakamura *et al.* (U.S. Patent 4,950,438). Therefore, this rejection is traversed with respect to the argued combination of references and not with respect to the cited combination of references.

This rejection should be withdrawn for at least the following reasons. Neither Keuper *et al.* nor Nakamura *et al.*, alone or in combination, teach or suggest every element set forth in the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *See* MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *See In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The present invention relates motors, and in particular, to an armature assembly the that may be encapsulated and to a method of encapsulating a motor. Independent claim 1 recites, “the retaining system including *a non-planar surface that interfaces with the windings to define at least one void* that permits flow of an encapsulation material into the void so as to facilitate attachment of the encapsulation material with the assembly.” Keuper *et al.* fails to teach this aspect of applicant's invention.

Keuper *et al.* describes a *planar* cap for retaining a conductor bar in a coil slot. Furthermore, Keuper *et al.* insures “that the top portion 9 of the slot closure 6 engages the top of the coil side 18 when the tabs 11 and 12 spring into the grooves 21 and 22.” (Column 2, lines 52-56.) Keuper *et al.* fails to teach or suggest *a non-planar surface that interfaces with the windings to define at least one void* that permits flow of an encapsulation material

into the void, as set forth in independent claim 1.

Nakamura *et al.* does not overcome the deficiencies of Keuper *et al.* with respect to independent claim 1. The Examiner contends that the coils 2 of Nakamura have dual functionality as both coils 2 and a retaining system for the coils 2. Applicant's representative respectfully submits that that the coils 2 are incapable of interfacing themselves as the non-planar surface of the present invention interfaces the windings to define at least one void. Thus, the coils 2 of Nakamura *et al.* are not a "non-planar surface that interfaces with the windings to define at least one void" as set forth in independent claim 1. Moreover, the drain hole 9 of Nakamura *et al.* is not a *void formed by the interfacing of a non-planar retaining system and a coil*, as set forth in the subject claims.

Furthermore, the Examiner asserts that it would have been obvious to one of ordinary skill in the art to combine the structure of Kueper *et al.* with the resin molding of Nakamura *et al.* in order to eliminate gas bubbles that are formed between the inner surface of the stator and the mold. However, the structure of Keuper *et al.* is incapable of admitting resin precisely because "the top portion 9 of the slot closure 6 engages the top of the coil side 18 when the tabs 11 and 12 spring into the grooves 21 and 22." (Column 2, lines 52-56.) It is inherent in the above statement, and clearly shown in figure 2 of Keuper *et al.*, that the Keuper invention does not teach or suggest creating at least one void that permits flow of an encapsulation material. Therefore, it would not have been obvious to one skilled in the art to combine the Keuper structure, which is designed to *eliminate* a void between a coil and a retaining structure, with a resin molding process, which requires space through which resin can flow.

Additionally, in this regard, the Keuper invention *teaches away* from creating a void between a retaining structure and a winding. (See, e.g., Column 1, lines 51-53: "It is the intention and general object of this invention to provide a slot closure which permits location of the conductor bars very close to the air gap.") Combining a reference with Keuper *et al.* for the purpose of introducing an element that increases the distance between conductor bars and the air gap of Keuper *et al.* contradicts the general object of Keuper *et al.* References that teach away from one another cannot properly be combined to form the basis of a 35 U.S.C. §103 rejection. (See, e.g., *In Re Grasselli*, 713 F.2d 731,

218 USPQ 769, 779, Fed. Cir. 1983; “It is improper to combine references where the references teach away from their combination.”)

In view of at least the above, it is readily apparent that neither Keuper *et al.* nor Nakamura *et al.*, alone or in combination, make obvious applicant’s invention as set forth in independent claim 1 and 11 (and claims 2, 7, 8, and 12, which depend respectively there from). Therefore, withdrawal of this rejection is respectfully requested.

VI. Rejection of Claims 15, 16, 18, 22, 24, 25, and 26 Under 35 U.S.C. §103(a)

Claims 15, 16, 18, 22, 24, 25, and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Keuper *et al.* (U.S. Patent 3,940,647) and in further view of Nakamura *et al.* (U.S. Patent 4,950,438). Withdrawal of this rejection is respectfully requested for at least the following reasons. Neither Keuper *et al.* nor Nakamura *et al.*, alone or in combination, teach or suggest every element set forth in the subject claims.

Independent claim 15 has been amended herein to recite “*a layer of a varnish material applied to the core and the windings, the outer covering being applied over the varnish, which encapsulates at least a substantial part of the core and windings.*” In view of the Examiner’s indication of the allowability of this aspect of applicant’s invention, it is respectfully submitted that claim 15 (and claims 16, 18, 22, 24, 25, and 26, which depend there from) are not made obvious by Keuper *et al.* and Nakamura *et al.* Therefore, this rejection should be withdrawn.

VII. Rejection of Claims 28, 29, and 30 Under 35 U.S.C. §103(a)

Claims 28, 29 and 30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Keuper *et al.* (U.S. Patent 3,940,647) and in further view of Nakamura *et al.* (U.S. Patent 4,950,438). This rejection should be withdrawn for at least the following reasons. Neither Keuper *et al.* nor Nakamura *et al.*, alone or in combination, teach or suggest every element set forth in the subject claims.

Independent claim 28 has been amended herein to recite “An armature assembly for a motor, comprising: electrically conductive means having a plurality of spaced apart teeth that delineate receiving means that receive means for electric field generation,

which, when energized, provide an electric field; the means for electric field generation, when energized, providing an electric field being located in associated receiving means around at least some of the teeth; and *means for retaining the means for electric field generation within the associated receiving means and for permitting flow of an encapsulation material into a void associated with means for retaining so as to facilitate attachment of an encapsulation material with the assembly.*" Thus, the means for retaining the means for electric field generation is also the means for permitting flow of an encapsulation material. Keuper *et al.* does not teach or suggest a retaining means that can permit flow of an encapsulating material.

Nakamura *et al.* fails to overcome the deficiencies of Keuper *et al.* with respect to independent claim 28. Specifically, Nakamura *et al.* does not teach or suggest a retaining means through which an encapsulating material can flow. As stated above with regard to Section I, the coils of Nakamura *et al.* cannot also be a retaining structure that interfaces with the coils to create a void into which encapsulating material can be introduced.

For at least the reasons stated above, it is respectfully submitted that applicant's invention is not made obvious by Keuper *et al.* or Nakamura *et al.*, alone or in combination. Therefore, withdrawal of the rejection of independent claim 28 (and claims 29 and 30, which depend there from), is respectfully requested.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,

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